

Urban development

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There is little doubt that urban growth and consolidation will result in deterioration of many of the natural plant communities along the Swan Coastal plain, even though the people responsible for directing that urban growth may do their utmost to protect these plant communities (or at least representative samples) through the various legislative powers that are available.

To illustrate the methods of controlling urban expansion, some history of regional planning needs to be outlined.

In 1955, the State Government commissioned consultant town planner Gordon Stephenson to prepare, in conjunction with the Town Planning Commissioner, Alistair Hepburn, a regional plan for Perth and Fremantle. This was the state's first attempt at regional planning. It did little for the *Banksia* woodland areas, other than identify them as suitable for "development as woodlands and forests".

The Stephenson Hepburn Plan, formed the basis of the Metropolitan Region Scheme, which was gazetted in 1963. As a statutory Scheme, it was the first in Australia, and is still the basis for urban development and expansion within the Perth area. It zones land for industrial, rural and urban uses and reserves land for a variety of purposes, including parks and recreation.

As a policy guide to identify future expansion needs for Perth, the Corridor Plan was adopted in 1970. This, although somewhat controversial, set down the basis for a series of urban corridors. The rural wedges between the corridors will experience significant pressures from growth that will affect the remaining areas of *Banksia* woodlands.

During the late 1970s a Conservation-through-Reserves Committee was established by the Department of Conservation and Environment in an attempt to identify those areas of Western Australia that needed to be protected from development. The Darling System, System 6, covered the Perth area. Recommendations made in the System 6 study have been endorsed by the State government, and will eventually be recognised in the Metropolitan Region Scheme. Several areas contain *Banksia* woodlands, but generally the wetlands received greater attention by this committee.

The future expansion of the region is now being re-examined as a result of a formal review of the Corridor Plan. This review is examining the various choices available for the region's future growth. These are:

1. Continued corridor growth as outlined in the Corridor Plan.
2. Peripheral Expansion.
3. Easterly Expansion.
4. Coastal Expansion.

In order to make these decisions, there must be some awareness of the nature of the expansion and the constraints. The following gives a broad basis for understanding the growth rates applicable to the Perth region.

- The region's population will continue to grow at a rate of between 1.5 and 2% or some 30 000 people per year. This means an increase in excess of 800 000 people by the year 2021.

- Residential development is the largest consumer of land, requiring some 12 000 lots per annum or 1 500 ha.
- There will be a need for up to 50 000 extra ha of land by the year 2021.
- 97% of the metropolitan population lives in the urban zone.
- There is expected to be a decline in the average number of persons per household from 2.84 in 1986 to 2.51 in 2001 and 2.38 in 2021.
- The North west corridor is experiencing the highest rate of lot consumption comprising nearly 25% of the metropolitan total.
- Increased population and urban expansion will place further pressure on the finely balanced and limited capacity of the metropolitan environment.

The team undertaking the corridor review is using a constraints mapping system to identify that land most suitable for urban development. The various constraints to development were identified and mapped. These include environmental constraints such as:

- The geomorphology of the coastal plain (V Semeniuk & D K Glassford - This publication).
- The water resources. The groundwater resources in particular are a constraint to further urban development, and a bonus to the further protection of the *Banksia* woodlands (J Kite & K Webster - This publication & J S Beard - This publication).
- The natural vegetation (J S Beard - This publication). There is some natural vegetation remaining on the coastal plain, but even this is often contaminated with weed species, and dieback disease (G J Keighery - This publication, S D Hopper & A H Burbidge - This publication).
- Significant landscape. These landscapes have been identified and plotted, and are considered of sufficient importance to be protected where possible. It is expected that the Metropolitan Region Scheme will be the primary vehicle for this protection.

The above constraints and others were used in the preparation of a comprehensive constraints map and, as a result of this, areas for urban expansion were identified.

The planning process does not stop there, as it involves public participation through submissions from individuals and groups that have studied the published concepts. These submissions will influence the final decisions on the future patterns of urban development.

There are two choices available for future urban expansion in Perth. Either, the environmental and planning recommendations are adhered to and development is restricted to the already established urban corridors, and therefore protect the wetlands and the *Banksia* woodlands from urban development, OR peripheral urban expansion is allowed, which will result in eventual destruction of the wetlands and woodlands.

Obviously every effort will be made to follow the first option, and to use the Metropolitan Region Scheme to reserve the valuable environmental areas between the urban corridors. The Proposed Metropolitan Parks system, outlined in Figure 1, is the preferred means of protecting these areas. One wonders, however, just how much protection will be forthcoming, given the

pressures that will result from adjoining residential commercial industrial and agricultural land uses, and from the following:

- Groundwater use, (J Kite - This publication).
- Disease (B L Shearer and T C Hill - This publication).
- Weeds (G J Keighery - This publication).
- Groundwater pollution (R Humphries - This symposium).

In the report 'Planning for the Future of the Perth Metropolitan Region' (State Planning Commission 1987) it is commented that reservation and acquisition of is one of the successes of the Corridor Plan. The annual cost of maintaining such areas is now the major problem.

There is a dearth of reliable information about recreation use patterns in and around Perth. Available evidence suggests that parts of the coastal foreshores, the Swan and Canning Rivers and Rottnest Island, are under the most intensive pressure. They are also the areas that are most attractive to tourists.

However, increases in population, affluence and leisure time are likely to cause growth in demand for other regional-scale open space (as distinct from local open space) and for recreational facilities in general. Cultural influences, including greater awareness of the natural environment and health-based life-styles, are likely to result in greater political support for such facilities.

The key issues for the future are the need for acquisition of more open space the better co-ordination of the planning and development of the regional open space system, and the introduction of a metropolitan system of management and administration. Funds will be needed for acquisition, development and maintenance of the metropolitan park system. Some revenue may be obtained from user charges in future.

In broader terms, the Perth coastal plain is a delicately balanced environment, far less able to withstand the impact of long-term urbanisation than the sites of most other Australian cities. This fact has been recognised in the formulation of the Corridor Plan and by Stephenson and Hepburn in their 1955 Plan on which the Metropolitan Region Scheme was based. It is through the recognition of environmental constraints that the sandy coastal plain can be separated into patterns of urban and non-urban land, and that a continuously sprawling metropolitan area may be avoided in the long term.

Although the ocean beaches, riverine environments and coastal wetlands system are under the greatest pressure from both use and development, the *Banksia* woodlands are by no means immune to this pressure. Their protection should continue to be a high priority in a revised strategy.

Adequate water resources are fundamental to the future development of the region and to maintain Perth's pleasant life-style and attractive environment. Land-use has a significant impact on both the quantity and quality of water resources. The groundwater recharge areas are under the most immediate threat and their continued protection should be given a high priority by the State Planning Commission, Water Authority and other responsible agencies. It is important that water quality be maintained and per capita consumption managed by encouraging land-use and development with low water demands, ensuring that groundwater is used efficiently, increasing recharge by surface drainage, and by containing pollution. There will also be a need to acquire more public land in the rural wedges to conserve environmentally important areas (such as the *Banksia* woodlands), to add to the metropolitan open space system, and to assist in the management of available water resources.

The establishment of a continuous regional open space chain has considerable potential for conserving the flora and fauna environments of the region. The most important are the northern chains of wetlands in Wanneroo, similar habitats in the Beelihar and Serpentine wetlands and the native forests, and *Banksia* woodlands some of which still remain intact.

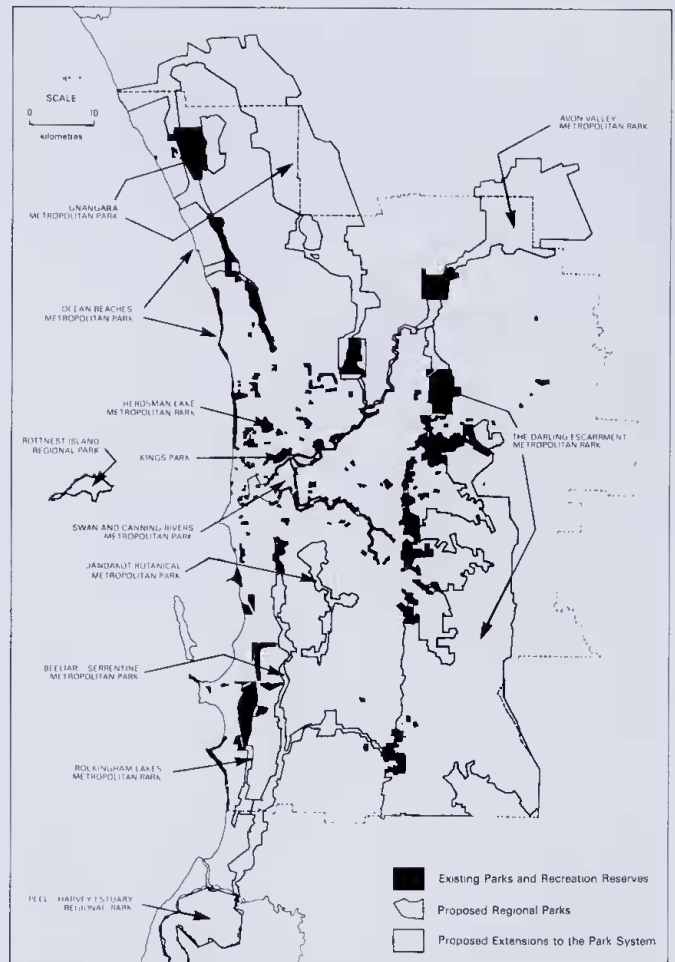


Figure 1 Proposed Metropolitan Parks
Source: State Planning Commission

With careful management and restricted access it may be possible to retain some areas of *Banksia* woodlands in original condition. But the balance will, at best, be altered, as Kings Park has been altered to cope with the increasing demands of an urban population that has more leisure time for use in passive and active recreational.

References

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